

Fassaden - Kraftwerk

(Facades - Power Plant)

Sun protection as an energy producer

Harmonizing facade design with an energy-producing facade is a major challenge - especially optimizing the usable area and the yield from solar modules in the facade.

Initially, roof surfaces appear to be more efficient as they are higher and face the sun directly. However, the facades of a building offer a significantly larger surface area than the roof. In addition, the average annual duration of sunshine on a facade is by no means less than the irradiation on the roof.

The newly developed telescopic lift and fold shutters from BeluTec are a major step forward in this respect.

The blades covered with photovoltaic modules can be extended to increase the energy-producing area. While the extended sashes feed the energy generated into the building, the window surfaces are automatically shaded in strong sunshine to naturally protect the building climate. Here, the extendable sashes act like an awning to protect against the sun and glare.

Depending on the position of the sun, the sashes can be set to a suitable angle of inclination for sun protection and optimized energy production. When there is little sunshine, when more light is needed in the interior, the sashes can simply be retracted.

The lift and fold shutters can be controlled centrally to achieve the ideal tilt position using sensors and weather data. However, the elements can also be controlled individually to provide suitable sun protection. The controls can also be integrated into smart home systems.

In this way, an enormous area can be created for solar modules.

The adjustable vertical facade tilts towards the sun and the entire facade surface, including windows, can be used to produce energy - even in winter when the sun is low.

As well as being used as a curtain wall, the system can also be used as sun protection over balconies or terraces, for example. There are also no limits to the look. The individual elements can be arranged flush with each other to create a homogeneous facade appearance. With the new developments in photovoltaic modules, various surfaces, colors and combinations are already possible.

www.belutec.com/fassaden-kraftwerk

Two innovation awards for BeluTec at R&T 2024



In Stuttgart, BeluTec received two awards for innovations that are both gigantic in size and advance the topic of renewable energies in facades.





Fassaden-Kraftwerk (Facades - Power Plant)

- > Maximum use of space
- > Optimized angle of sun incidence
- > Simultaneous sun protection
- > Fast amortization

Facade area

15 sqm one element with 5m window and 3m floor

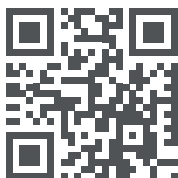
Effective area

15 sqm - full area used

Yield

3,000kWh/year + 25% higher efficiency through tracking
= 3,750kWh/year

>> 1,500€ electricity - around and in front of a window



BeluTec Vertriebsgesellschaft mbH

Am Seitenkanal 3 | D-49811 Lingen (Ems)

Telefon +49 (0) 591 | 912 04 - 0

Telefax +49 (0) 591 | 542 44

info@belutec.com | www.belutec.com

 **BeluTec**
TOR- & FASSADENSYSTEME